



5890

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REMOTE-CUTOFF BEAM PENTODE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage. 6.3 ac or dc volts

Current. 0.6 amp

Mu-Factor, Grid No.2 to

Grid No.1 5

Direct Interelectrode Capacitances:

Grid No.1 to Plate 0.018 μf Input. 7.5 μf Output 1.6 μf

Mechanical:

Mounting Position. Any

Overall Length 6-1/2" $\pm$ 1/4"Seated Length. 6" $\pm$ 1/4"

Maximum Diameter 1-1/2"

Cap. Small

Base Small-Shell Duodecal 7-Pin

Basing Designation for BOTTOM VIEW 12J

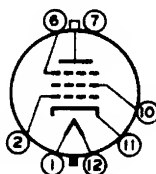
Pin 1-Heater

Pin 2-Grid No.1

Pin 6-Grid No.3

Pin 7-Internal Con.-

Do Not Use



Pin 10-Grid No.2

Pin 11-Cathode

Pin 12-Heater

Cap-Plate

Bulb Temperature 220 max. $^{\circ}\text{C}$

VOLTAGE-CONTROL SERVICE

Maximum CCS* Ratings, Absolute Values:

DC PLATE VOLTAGE 30000 max. volts

DC GRID-No.3 VOLTAGE 6600 max. volts

DC GRID-No.2 VOLTAGE 450 max. volts

DC GRID-No.1 VOLTAGE:

Negative bias value. -200 max. volts

Positive bias value. 0 max. volts

Positive peak value. 2 max. volts

MAX.-SIGNAL DC PLATE VOLTAGE 500 max. volts

MAX.-SIGNAL GRID-No.3 INPUT. 1 max. watt

MAX.-SIGNAL GRID-No.2 INPUT. 0.1 max. watt

PLATE DISSIPATION. 10 max. watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode:

During equipment warm-up period

not exceeding 15 seconds 450 max. volts

After equipment warm-up period 165 max. volts

Heater positive with respect to cathode. 165 max. volts

* : See next page.

MAY 1, 1950

TUBE DEPARTMENT

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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Typical Operation as Shunt Voltage-

Regulator Tube in Accompanying Circuit

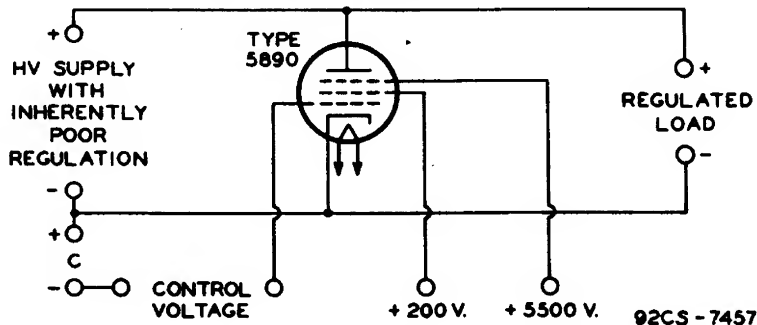
DC Plate Voltage.	20000	30000	volts
DC Grid-No.3 Voltage.	5500	5500	volts
DC Grid-No.2 Voltage*.	200	200	volts
DC Grid-No.1 Voltage**.	-60	-60	volts
Peak Grid-No.1 Voltage.	45	20	volts
Zero-Sig. DC Plate Cur.	0	0	μ amp
Max.-Sig. DC Plate Cur.	500	60	μ amp
Zero-Sig. DC Grid-No.3 Cur.	0	0	μ amp
Max.-Sig. DC Grid-No.3 Cur.	0	0	μ amp
Zero-Sig. DC Grid-No.2 Cur.	0	0	μ amp
Max.-Sig. DC Grid-No.2 Cur.	0	0	μ amp
Grid-No.1 Bias (Approx.) for plate current of 10 μ amp.	-52	-52	volts
Grid-No.1—Plate Transconductance	11	3	μ hos

• Continuous commercial service.

* Subject to variation of $\pm 40\%$ if grid-No.1 voltage is desired at indicated value.

** Subject to variation of $\pm 40\%$ if grid-No.2 voltage is desired at indicated value.

Shunt Voltage-Regulator Circuit



NOTE: THE CONTROL VOLTAGE MAY BE TAKEN FROM THE LOAD CIRCUIT OR FROM A CIRCUIT SUPPLYING SIGNAL TO THE LOAD CIRCUIT, DEPENDING ON THE TYPE OF LOAD INVOLVED.

OPERATING NOTES

Operation of the 5890 with a plate voltage above approximately 16000 volts results in the production of soft x-rays which can constitute a health hazard on prolonged exposure unless the tube is adequately shielded. Relatively simple shielding should prove adequate, but the need for this precaution should be considered in equipment design.

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MAY 1, 1950

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